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| Substitute Form PTO-1449 (Modified) | | U.S. Department of Commerce Patent and Trademark Office | Attorney's Docket No. 01997-274002 | Application No. 09/397,432 |
| Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b)) | | Applicant Moungi G. Bawendi et al. | | |
| | | Filing Date September 17, 1999 | Group Art Unit 1627 | |

| U.S. Patent Documents | | | | | | | |
|-----------------------|-----------|---------------|------------|----------------------|-------|----------|----------------------------|
| Examiner Initial | Desig. ID | Patent Number | Issue Date | Patentee | Class | Subclass | Filing Date If Appropriate |
| MC | AA | 3,996,345 | 12/07/1976 | Ullman et al. | 424 | 12 | |
| | AB | 4,637,988 | 01/20/1987 | Hinshaw et al. | 436 | 546 | |
| | AC | 4,777,128 | 10/11/1988 | Lippa | 435 | 5 | |
| | AD | 5,262,357 | 11/16/1993 | Alivisatos et al. | 437 | 233 | |
| | AE | 5,293,050 | 03/08/1994 | Chapple-Sokol et al. | 257 | 17 | |
| | AF | 5,354,707 | 10/11/1994 | Chapple-Sokol et al. | 437 | 106 | |
| | AG | 5,395,791 | 03/07/1995 | Cheng et al. | 437 | 105 | |
| | AH | 5,422,489 | 06/06/1995 | Bhargava | 250 | 488.1 | |
| | AI | 5,492,080 | 02/20/1996 | Ohkawa et al. | 117 | 108 | |
| | AJ | 5,499,260 | 03/12/1996 | Takahashi et al. | 372 | 46 | |
| | AK | 5,515,393 | 05/07/1996 | Okuyama et al. | 372 | 45 | |
| | AL | 5,525,377 | 06/11/1996 | Gallagher et al. | 427 | 512 | |
| | AM | 5,537,000 | 07/16/1996 | Alivisatos et al. | 313 | 506 | |
| | AN | 5,541,948 | 07/30/1996 | Krupke et al. | 372 | 41 | |
| | AO | 5,585,640 | 12/17/1996 | Huston et al. | 250 | 483.1 | |
| | AP | 5,674,698 | 10/07/1997 | Zarling et al. | 435 | 7.92 | |
| | AQ | 5,736,330 | 04/07/1998 | Fulton | 435 | 6 | |
| | AR | 5,747,180 | 05/05/1998 | Miller et al. | 428 | 601 | |
| ✓ | AS | 5,985,353 | 11/16/1999 | Lawton et al. | 427 | 2.13 | |
| MC | AT | 6,114,038 | 09/05/2000 | Castro et al. | 428 | 402.24 | |

| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | |
|---|-----------|-----------------|------------------|--------------------------|-------|----------|----------------------------|
| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation Yes No |
| MC | AU | WO 98/19963 | 05/14/1998 | PCT | | | |
| ↓ | AV | WO 98/33070 | 07/30/1998 | PCT | | | |
| ↓ | AW | WO 99/19515 | 04/22/1999 | PCT | | | |
| MC | AX | WO 00/27365 | 05/18/2000 | PCT | | | |

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|--|-----------------------------|
| Examiner Signature | Date Considered 12/21/05 |
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| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | | |
|---|-----------|-----------------|------------------|--------------------------|-------|----------|-------------|----|
| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation | |
| | | | | | | | Yes | No |
| MC | BA | WO 00/27436 | 05/18/2000 | PCT | | | X | |
| MC | BB | WO 00/28088 | 05/18/2000 | PCT | | | X | |
| MC | BC | WO 00/28089 | 05/18/2000 | PCT | | | X | |

| Other Documents (include Author, Title, Date, and Place of Publication) | | |
|---|-----------|--|
| Examiner Initial | Desig. ID | Document |
| MC | BD | Alivisatos et al., "Semiconductor Clusters, Nanocrystals, and Quantum Dots," <i>Science</i> , 271:933-937, February 16, 1996 |
| | BE | Alivisatos et al., "Organization of 'nanocrystal molecules' using DNA," <i>Nature</i> , 382:609-611, August 15, 1996 |
| | BF | Bawendi et al., "Luminescence properties of CdSe quantum crystallites: resonance between interior and surface localized states," <i>J. Chem. Phys.</i> , 96(2):946-954, January 15, 1992 |
| | BG | Beverloo et al., "Preparation and Microscopic Visualization of Multicolor Luminescent Immunophosphors," <i>Cytometry</i> , 13:561-570, 1992 |
| | BH | Bruchez et al., "Semiconductor nanocrystals as fluorescent probes for biology," <i>Cytometry</i> , Supplement 9, p. 26, March, 1998 |
| | BI | Bruchez et al., "Luminescent Semiconductor Nanocrystals: Intermittent Behavior and Use as Fluorescent Biological Probes," Doctoral Dissertation, University of California, July 13, 1998 |
| | BJ | Colvin et al., "Light-emitting diodes made from cadmium selenide nanocrystals and a semiconducting polymer" <i>Nature</i> , 370(6488):354-357, August 4, 1994 |
| | BK | Cook, "Scintillation proximity assay: a versatile high-throughput screening technology," <i>Drug Discovery Today</i> , 1:287-294, July 1996 |
| | BL | Correa-Duarte et al., "Stabilization of CdS semiconductor nanoparticles against photodegradation by silica coating procedure," <i>Chem. Phys. Lett.</i> , 286:497-501, April 17, 1998 |
| | BM | Dabbousi et al., "Electroluminescence from CdSe quantum-dot/polymer composites" <i>Appl. Phys. Lett.</i> , 66(11):1316-1318, March 13, 1995 |
| | BN | Fox et al., "Fluorescence and Redox Activity of Probes Anchored through an Aminothiol to Polycrystalline Gold" <i>Langmuir</i> , 14:816-820, 1998 |
| | BO | Gan et al., "Enhanced Photoluminescence and Characterization of Mn-Doped ZnS Nanocrystallites Synthesized in Microemulsion" <i>Langmuir</i> , 13:6427-6431, 1997 |
| | BP | Gao et al., "Strongly Photoluminescent CdTe Nanocrystals by Proper Surface Modification," <i>J. Phys. Chem.</i> , 102:8360-8363, 1998 |
| | BQ | Guha et al., "Hybrid organic-inorganic semiconductor-based light-emitting diodes" <i>J. Appl. Phys.</i> , 82(8):4126-4128, October 15, 1997 |
| | BR | Jarvis et al., "Solution Synthesis and Photoluminescence Studies of Small Crystallites of Cadmium Telluride," <i>Mat. Res. Soc. Symp. Proc.</i> , 272:229-234, 1992 |
| ✓ | BS | Kagan et al., "Electronic Energy Transfer in CdSe Quantum Dot Solids," <i>Physical Review Letters</i> , 76(9):1517-1520, 1996 |
| MC | BT | Kagan et al., "Long-range resonance transfer of electronic excitations in close-packed CdSe quantum-dot solids," <i>Physical Review B</i> , 54(12):8633-8643, September 15, 1996-II |

| | |
|---|-----------------------------|
| Examiner Signature  | Date Considered 12/21/05 |
|---|-----------------------------|

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|--|-----------|---|--|
| Examiner Initial | Desig. ID | Document | |
| MC | CA | Lawless et al., "Bifunctional Capping of CdS Nanoparticles and Bridging to TiO ₂ ," <i>J. Phys. Chem.</i> , 99:10329-10335, 1995 | |
| | CB | Lee et al., "Surface Derivatization of Nanocrystalline CdSe Semiconductors," <i>Mat. Res. Soc. Symp. Proc.</i> , 452:323-328, 1997 | |
| | CC | Liz-Marzan et al., "Synthesis of Nanosized Gold-Silica Core-Shell Particles" <i>Langmuir</i> , 12(18):4329-4335, 1996 | |
| | CD | Mahtab et al., "Protein-Sized Quantum Dot Luminescence Can Distinguish between 'Straight', 'Bent', and 'Kinked' Oligonucleotides", <i>J. Am. Chem. Soc.</i> , 117:9099-9100, 1995 | |
| | CE | Mahtab et al., "Preferential-absorption of a 'kinked' DNA to a newtral curved surface: comparison to and implications for nonspecific DNA-protein interactions," <i>J. Am. Chem. Soc.</i> , 118:7028-7032, 1996 | |
| | CF | Mikulec et al., "Synthesis and Characterization of Highly Luminescent (CdSe)ZnS Quantum Dots." <i>Materials Research Society Symposium</i> , 452:359-364, 1997 | |
| | CG | Müllenborn et al., "Characterization of Solution-Synthesized CdTe and HgTe," <i>Applied Physics</i> , 56:317-321, 1993 | |
| | CH | Murphy et al., "Quantum dots as inorganic DNA-binding proteins," <i>Mat. Res. Soc. Symp.</i> , 452:597-600, 1997 | |
| | CI | Pehnt et al., "Nanoparticle Precursor Route to Low-Temperature Spray Deposition of CdTe Thin Films," <i>Appl. Phys. Lett.</i> , 67(15):2176-2178, 1995 | |
| | CJ | Peng et al., "Epitaxial Growth of Highly Luminescent CdSe/CdS Core/Shell Nanocrystals with Photostability and Electronic Accessibility." <i>J. Am. Chem. Soc.</i> , 119:7019-7029, 1997 | |
| | CK | Peng et al., "Synthesis and Isolation of a Homodimer of Cadmium Selenide Nanocrystals," <i>Angewandte Chemie</i> , 36:145-147, 1997 | |
| | CL | Rajh et al., "Synthesis and Characterization of Surface-Modified Colloidal CdTe Quantum Dots" <i>J. Phys. Chem.</i> , 97:11999-12003, Nov. 1993 | |
| | CM | Rogach et al., "Synthesis and characterization of Thiol-Stabilized CdTe Nanocrystals" <i>Ber. Bunsenges. Phys. Chem.</i> , 100(11):1772-2778, 1996 | |
| | CN | Schröck et al., "Multicolor Spectral Karyotyping of Human Chromosomes," <i>Science</i> , 273:494-497, July 26, 1996 | |
| | CO | Spanhel et al., "Photochemistry of Colloidal Semiconductors. Surface Modification and Stability of Strong Luminescing CdS Particles" <i>J. Am. Chem. Soc.</i> , 109(19):5649-5655, 1987 | |
| | CP | Steigerwald et al., "Surface Derivatization and Isolation of Semiconductor Cluster Molecules," <i>J. Am. Chem. Soc.</i> , 110:3046-3050, 1988 | |
| MC | CQ | Zhang et al., "Novel Flow Cytometry Compensation Standards: Internally Stained Fluorescent Microspheres With Matched Emission Spectra and Long-Term Stability," <i>Cytometry</i> , 33:244-248, October 1, 1998 | |

| | |
|--|-----------------|
| Examiner Signature | Date Considered |
|  | 12/21/05 |
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| U.S. Patent Documents | | | | | | | |
|-----------------------|-----------|---------------|------------|--------------------|-------|----------|----------------------------|
| Examiner Initial | Desig. ID | Patent Number | Issue Date | Patentee | Class | Subclass | Filing Date If Appropriate |
| MG | AA | 5,304,786 | 04/19/1994 | Pavlidis et al. | 235 | 462 | |
| | AB | 5,505,928 | 04/09/1996 | Alivisatos et al. | 423 | 299 | |
| | AC | 5,789,162 | 08/04/1998 | Dower et al. | 435 | 6 | |
| | AD | 5,565,324 | 10/15/1996 | Still et al. | 435 | 6 | |
| | AE | 5,625,456 | 04/29/1997 | Lawandy | 356 | 376 | |
| | AF | 5,721,099 | 02/24/1998 | Still et al. | 435 | 6 | |
| ↓ | AG | 5,770,299 | 06/23/1998 | Dannenhauer et al. | 428 | 195 | |
| MG | AH | 5,751,018 | 05/12/1998 | Alivisatos et al. | 257 | 64 | |

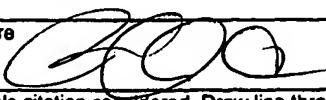
| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | |
|---|-----------|-----------------|------------------|--------------------------|-------|----------|-------------|
| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation |
| | | | | | | | Yes No |
| MG | AI | WO 95/29473 | 11/02/1995 | PCT | | | |
| ↓ | AJ | WO 98/04740 | 02/05/1998 | PCT | | | |
| ↓ | AK | WO 98/36376 | 08/20/1998 | PCT | | | |
| MG | AL | WO 98/46372 | 10/22/1998 | PCT | | | |

| Other Documents (include Author, Title, Date, and Place of Publication) | | |
|---|-----------|--|
| Examiner Initial | Desig. ID | Document |
| MG | AM | Kortan et al., "Nucleation and Growth of CdSe on ZnS Quantum Crystallite Seeds, and Vice Versa, In Inverse Micelle Media" <i>J. Am Chem. Soc.</i> 112:1327-1332, 1990 |
| | AN | Coffer et al., "Characterization of quantum-confined CdS Nanocrystallites stabilized by deoxyribonucleic acid (DNA)" <i>Nanotechnology</i> 3:69-76, 1992 |
| | AO | Murray et al., "Synthesis and Characterization of Nearly Monodisperse CdE (E=S, Se, Te) Semiconductor Nanocrystallites" <i>J. Am. Chem. Soc.</i> 115(19):8706-8715, 1993 |
| | AP | Whitesell et al., "Directionally Aligned Helical Peptides on Surfaces" <i>Science</i> 261:73-76, July 1993 |
| | AQ | Moran et al., "Radio Frequency Tag Encoded Combinatorial Library Method for the Discovery of Tripeptide-Substituted Cinnamic Acid Inhibitors of the Protein Tyrosine Phosphatase PTP1B" <i>J. Am. Chem. Soc.</i> 117:10787-10788, 1995 |
| ↓ | AR | Nicolaou et al., "Radiofrequency Encoded Combinatorial Chemistry" <i>Ingew. Chem. Int. Ed. Engl.</i> 34(20):2289-2291, 1995 |
| MG | AS | Alivisatos, "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals" <i>J. Phys. chem.</i> 1996(100):13226-13239, 1996 |

| | |
|--|-----------------|
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|--|-----------|---|--|
| Examiner Initial | Desig. ID | Document | |
| <i>MG</i> | BA | Danek et al., "Synthesis of Luminescent Thin-Film CdSe/ZnSe Quantum Dot Composites Using CdSe Quantum Dots Passivated with an Overlayer of ZnSe" <i>Chem. Mater.</i> 8(1):173-180, 1996 | |
| | BB | Matsumoto et al., "Preparation of Monodisperse CdS Nanocrystals by Size Selective Photocorrosion" <i>J. Phys. Chem.</i> 100(32):13781-13785, 1996 | |
| | BC | Hines et al., "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals" <i>J. Phys. Chem.</i> 100:468-471, January 1996 | |
| | BD | McGall et al., "Light-directed synthesis of high-density oligonucleotide arrays using semiconductor photoresists" <i>Proc. Natl. Acad. Sci. USA</i> 93:13555-13560, November 1996 | |
| | BE | Chee et al., "Accessing Genetic Information with High-Density DNA Arrays" <i>Science</i> 274(5287):610-614, October 25, 1996 | |
| | BF | Empedocles et al., "Photoluminescence Spectroscopy of Single CdSe Nanocrystallite Quantum Dots" <i>Phys. Rev. Lett.</i> 77(18):3873-3876, October 1996 | |
| | BG | Nirmal et al., "Fluorescence Intermittency in single Cadmium Selenide Nanocrystals" <i>Nature</i> 383:802-804, October 1996 | |
| | BH | Egner et al., "Tagging in combinatorial chemistry: the use of coloured and fluorescent beads" <i>Chem. Commun.</i> , 735-736, 1997 | |
| | BI | Empedocles et al., "Quantum-Confinement Stark Effect in Single CdSe Nanocrystallite Quantum Dots" <i>Science</i> 278:2114-2117, December 1997 | |
| | BJ | Fodor, "Techwire" <i>Science</i> 277(5324):393-395, July 18, 1997 | |
| | BK | Kuno et al., "The band edge luminescence of surface modified CdSe nanocrystallites: Probing the luminescing state" <i>J. Chem. Phys.</i> 106(23):9869-9882, June 1997 | |
| | BL | Dabbousi, et al., "(CdSe)ZnS core-shell quantum dots: synthesis and characterization of a size series of highly luminescent nanocrystallites" <i>J. of Phys. Chem. B</i> 101(46):9463-9475, November 13, 1997 | |
| | BM | Michael et al., "Randomly Ordered Addressable High-Density Optical Sensor Arrays" <i>Analyt. Chem.</i> 70(7):1242-1248, April 1998 | |
| | BN | Winzeler et al., "Direct Allelic Variation Scanning of the Yeast Genome" <i>Science</i> 281:1194-1197, August 1998 | |
| | BO | Wang et al., "Large-Scale Identification, Mapping, and Genotyping of Single-Nucleotide Polymorphisms in the Human Genome" <i>Science</i> 280:1077-1082, May 1998 | |
| | BP | Mikulec et al., "Fluorescent semiconductor nanocrystallites derivatized with biomolecules" <i>Amer. Chem. Soc. Nat'l Meeting</i> , Boston, MA, August 24, 1998 | |
| | BQ | Service, "Semiconductor Beacons Light Up Cell Structures" <i>Science</i> 281:19930-1931, September 25, 1998 | |
| | BR | Jacoby, "Quantum dots meet biomolecules" <i>C&E News</i> :8, September 28, 1998 | |
| | BS | Bruchez et al., "Semiconductor Nanocrystals as Fluorescent Biological Labels" <i>Science</i> 281:2013-2016, September 1998 | |
| <i>V</i> | BT | Chan et al., "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection" <i>Science</i> 281:2016-2018, September 1998 | |
| | BU | Wade, "In the Hunt for Useful Genes, a Lot Depends on "Snips"" :C1, C5 August 11, 1998 | |
| <i>MG</i> | BV | Lett, "Color-Coding Quanntum Dots Debut with Promising Careers In Clinical Diagnostics Field" :1-2, September 25, 1998 | |

| | |
|--|---------------------------------|
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|--|-----------|--|--|
| Examiner Initial | Desig. ID | Document | |
| <i>MCR</i> | CA | Baldwin et al., "Synthesis of a Small Molecule Combinatorial Library Encoded with molecular Tags" <i>J. Am. Chem. Soc.</i> 117:5588-89, 1995 | |
| <i>✓</i> | CB | Czarnik, "Encoding methods for combinatorial chemistry" <i>Curr Opin Chem Biol.</i> 1(1):60-6, 1997 | |
| <i>✓</i> | CC | Plunkett et al., "Combinatorial chemistry and new drugs" <i>Sci Am</i> 276(4):68-73, 1997 | |
| <i>MCR</i> | CD | Bawendi et al., Poster Presentation Entitled: "Fluorescent Semiconductor Nanocrystallites Derivatized With Biomolecules," Presented at the 216 th National Meeting of the American Chemical Society, August 23-27, 1998 | |

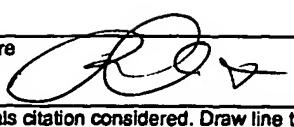
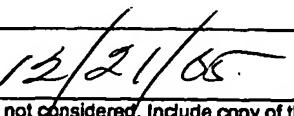
| | |
|--|------------------------------------|
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| MC | AA | 6,309,701 B1 | 10/2001 | Barbera-Guillem | | | |
| MC | AB | 6,355,432 B1 | 3/2002 | Fodor et al. | | | |

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|-----------------------|-----------|-----------------|------------------|--------------|-------|----------|----------------------------|
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| MC | AA | 5,308,804 | 05-1998 | Lee | | | |
| MC | AB | 5,625,456 | 04-1997 | Lawandy | | | |
| MC | AC | 5,990,479 | 11/23/99 | Weiss et al. | | | |
| | AD | | | | | | |
| | AE | | | | | | |
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|---|-----------|-----------------|------------------|--------------------------|-------|----------|----------------------------|
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| | AL | | | | | | |
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|---|-----------|--|
| Examiner Initial | Desig. ID | Document |
| MC | AQ | Danek et al. (1996) Chemistry of Materials 8: 173-180 |
| MC | AR | Bawendi et al., Poster, Entitled "Fluorescent Semiconductor Nanocrystallites Derivatized With Biomolecules," Presented at the 216 th Meeting of the American Chemical Society Aug. 23-27, 1998. |
| | AS | Sambrook et al., Molecular Cloning: A Laboratory Manual, Second Edition, Cold Spring Harbor Press, page 12-14 NO COPY |
| | AT | |

| | |
|--|-----------------|
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| | 10/21/06 |
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| Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b)) | | Applicant Mounji BAWENDI, et al. | O I P E OCT 19 2005 PATENT & TRADEMARK OFFICE 1639 |
| | | Filing Date August 4, 2003 | |

| Other Documents (include Author, Title, Date, and Place of Publication) | | |
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| Examiner Initial | Desig. ID | Document |
| MG | AA | Ekimov, A.I., et al., "Quantum Confined Atoms of Doped ZnO Nanocrystals," <i>Phys. Stat. Sol (b)</i> 229, No. 2, 897-901 (2002). |
| | AB | Ekimov, A.I. et al., "Spin-flip and acoustic-phonon Raman scattering in CdS nanocrystals," <i>Physical Review B</i> , Vol. 58, No. 4, 15 (July 1998-II), 2077-2087 |
| | AC | Ekimov, A.I. et al., "CdS nanocrystal growth in thin silica films: evolution of size distribution function," <i>Journal of Crystal Growth</i> 184/185 (1998) 360-364. |
| | AD | Ekimov, A.I. et al., "Dynamics of excitons in CuBr nanocrystals: Spectral-hole burning and transient four-wave-mixing measurements," <i>Physical Review B</i> , Vol. 57, No. 3, 15 January 1998-I, 1774-1783. |
| | AE | Ekimov, A.I. et al., "Size-selective resonant Raman scattering in CdS doped glasses," <i>Physical Review B</i> , Vol. 57, No. 1, 1 January 1998-I, 341-346. |
| | AF | Ekimov, A.I. et al., "Growth and optical properties of semiconductor nanocrystals in a glass matrix," <i>Journal of Luminescence</i> 70 (1996) 1-20. |
| | AG | Ekimov, A.I. et al., "Size dependence of acoustic and optical vibrational modes of CdSe nanocrystals in glasses," <i>Journal of Non-Crystalline Solids</i> 197 (1996) 238-246. |
| | AH | Ekimov, A.I. et al., "Subpicosecond dynamics of confined excitons in CuCl nanocrystals," <i>Materials Science and Engineering</i> A217/218 (1996) 167-170. |
| | AI | Ekimov, A.I. et al., "Enhancement of electron-hole exchange interaction in CdSe nanocrystals; A quantum confinement effect," <i>Physical Review B</i> , Vol. 53, No. 3, 15 January 1996-I, 1336-1342. |
| | AJ | Ekimov, A.I. et al., "Subpicosecond dynamics of confined excitons and optical nonlinearities of CuCl quantum dots," <i>Journal of Luminescence</i> 66 & 67 (1996) 406-409. |
| | AK | Ekimov, A.I. et al., "Size-dependent Electron-Hole Exchange Interaction in CdSe Quantum Dots, <i>Il Nuovo Cimento</i> ," Vol. 17, Nos. 11-12, (1995) 1407-1412. |
| | AL | Ekimov, A.I. et al., "Polaron and Exciton-Phonon Complexes in CuCl Nanocrystals," <i>Physical Review Letters</i> , Vol. 74, No. 9, 27 February 1995, p.1645. |
| | AM | Ekimov, A.I. et al., "Growth of CdSe nanocrystals in ion-implanted SiO ₂ films," <i>Journal of Crystal Growth</i> 151 (1995) 38-45. |
| ✓ | AN | Ekimov, A.I. et al., "Effects of Resonance on Low-Frequency Raman Scattering From Semiconductor Nanocrystals," <i>Radiation Effects and Defects in Solids</i> , 1995, Vol. 137, pp-45-50. |
| MC | AO | Ekimov, A.I. et al., "Optical Properties of Oxide Glasses Doped by Semiconductor Nanocrystals," <i>Radiation Effects and Defects in Solids</i> , 1995, Vol. 134, pp-11-22. |

Examiner Signature

Date Considered

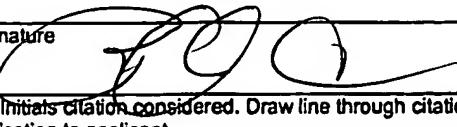
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| Substitute Form PTO-1449 (Modified) | | U.S. Department of Commerce Patent and Trademark Office | Attorney's Docket No. 14952.0274 CIP DIV | Application No. 10/632,922 |
| Information Disclosure Statement by Applicant (Use several sheets if necessary) | | Applicant Mounji BAWENDI, et al. | | |
| | | Filing Date August 4, 2003 | Group Art Unit 1639 | |
| (37 CFR §1.98(b)) | | | | |
| <i>MCY</i> | AP | Ekimov, A.I. <i>et al.</i> , "Enhancement of Exciton Exchange Interaction by Quantum Confinement in CdSe Nanocrystals," <i>Jpn. J. Appl. Phys.</i> , Vol. 34, 12-14 (1994). | | |
| | AQ | Ekimov, A.I. <i>et al.</i> , "Growth of CdS nanocrystals in silicate glasses and in thin SiO ₂ films in the Initial states of the phase separation of a solid solution," <i>Semiconductors</i> , 28 (5), May 1994, 486-493. | | |
| | AR | Ekimov, A.I. <i>et al.</i> , "Interface effects on the properties of confined excitons in CuCl microcrystals," <i>Journal of Luminescence</i> 60 & 61 (1994) 396-399. | | |
| | AS | Ekimov, A. I., "Surface Recombination of Nonequilibrium Electron-Hole Plasma in Laser-Modified Semiconductor-Doped Glasses," <i>Solid State Communications</i> , Vol. 87, No. 6, 577-580 (1993). | | |
| | AT | Ekimov, A. I. "Dynamics of Nonlinear Optical Response of CuBr-Doped Glasses," <i>Superlattices and Microstructures</i> , Vol. 3, No. 2, 199-202 (1993). | | |
| | AU | Ekimov, A. I., "Absorportion and intensity-dependent photoluminescence measurements on CdSe quantum dots: assignment of the first electronic transitions," <i>Journal of the Optical Society of America</i> , Vol. 10, Nos. 1-12, 100-107 (1992). | | |
| | AV | Ekimov, A.I. <i>et al.</i> "Preparation and investigation of SIO ₂ films activated by CdS semiconductor nanocrystals," <i>Soviet Physics Semiconductors</i> , Vol. 26, 57-59 (1992). | | |
| | AW | Ekimov, A.I. <i>et al.</i> "Generation of reflected second harmonic at semiconductor quantum dots," <i>JETP Letters</i> , Vol. 55, No. 8, 435-439 (1992). | | |
| | AX | Ekimov, A.I. <i>et al.</i> "Dimensional Effects in Luminescence Spectra of Zero-Dimensional Semiconductor Structures," <i>Bulletin of the Russian Academy of Sciences</i> , Vol. 56, No. 2, pp. 154-157, February, 1992. | | |
| | AY | Ekimov, A.I. <i>et al.</i> , "Fast switching of the transmission of light by glasses activated with CdS microcrystals," <i>Sov. Phys. Semicond.</i> , Vol.25 No.2, 164-166 (1991). | | |
| | BA | Ekimov, A.I. <i>et al.</i> , "Resonance Raman Spectroscopy of Electron-Hole Pairs -- Polar Phonon Coupling in Semiconductor Quantum Microcrystals," <i>Solid State Communications</i> , Vol. 78, No. 10, pp-853-856, 1991. | | |
| | BB | Ekimov, A.I. <i>et al.</i> , "Optics of Zero Dimensional Semiconductor Systems, <i>Acta Physica Polonica A</i> ," Vol. 79 (1991), No. 1. pp. 5-14. | | |
| | BC | Ekimov, A.I. <i>et al.</i> , "Optical Properties of Semiconductor Quantum Dots in Glass Matrix," <i>Physica Scripta</i> . Vol. T39, 217-222 (1991). | | |
| | BD | Ekimov, A.I. <i>et al.</i> "Rapid Processes of Darkening and Bleaching in CdS Doped Glasses," <i>Superlattices and Microstructures</i> Vol. 10, No. 3, 307-310 (1990). | | |
| <i>✓</i> | BE | Ekimov, A.I. <i>et al.</i> , "Auger ionization of semiconductor quantum drops in a glass matrix," <i>Journal of Luminescence</i> 47 (1990) 113-127 North-Holland. | | |
| <i>MCY</i> | BF | Ekimov, A.I. <i>et al.</i> , "Time-Resolved Luminescence of CdSe Microcrystals," <i>Solid State Communications</i> , Vol. 74, No. 7, pp. 555-557, 1990. | | |

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| (37 CFR §1.98(b)) | | | | |
| <i>MC</i> | BG | Ekimov, A.I. <i>et al.</i> , "Quantum-Size Stark Effect in Semiconductor Microcrystals," <i>Journal of Luminescence</i> 46 (1990) 97-100 North-Holland. | | |
| | BH | Ekimov, A.I. <i>et al.</i> , "Spectra and Decay Kinetics of Radiative Recombination in CdS Microcrystals," <i>Journal of Luminescence</i> 46 (1990) 83-95 North-Holland. | | |
| | BI | Ekimov, A.I. <i>et al.</i> , "Influence of high hydrostatic pressures on the exciton spectrum of CdS microcrystals in glass," <i>Sov. Phys. Semicond.</i> 23(9), September 1989, pp. 965-66. | | |
| | BJ | Ekimov, A.I. <i>et al.</i> , "Photoluminescence of quasizero-dimensional semiconductor structures," <i>Sov. Phys. Solid State</i> 31(8), August 1989, pp. 1385-93. | | |
| | BK | Ekimov, A.I. <i>et al.</i> , "Photoionization of semiconducting microcrystals in glass," <i>Sov. Phys. Solid State</i> 31(1), January 1989, pp. 149-151. | | |
| | BL | Ekimov, A.I. <i>et al.</i> , "Donor-like Exciton in Zero-Dimension Semiconductor Structures," <i>Solid State Communications</i> , Vol. 69, No. 5, pp. 565-568, 1989. | | |
| | BM | Ekimov, A.I. <i>et al.</i> , "Nonlinear Optics of Semiconductor-Doped Glasses," <i>Phys. Stat. Sol. (b)</i> 150, (1988) pp. 627-633. | | |
| | BN | Ekimov, A.I. <i>et al.</i> , "Nonlinear optical properties of semiconductor microcrystals," <i>JETP Lett.</i> , Vol. 46, No. 10, 25 November 1987 pp. 435-439. | | |
| | BO | Ekimov, A.I. <i>et al.</i> , "Quantization of the energy spectrum of holes in the adiabatic potential of the electron," <i>JETP Lett.</i> , Vol. 43, No. 6, 25 March 1986, pp. 376-379. | | |
| | BP | Ekimov, A.I. <i>et al.</i> , "Quantum Size Effect in Semiconductor Microcrystals," <i>Solid State Communications</i> , Vol. 56, No. 11, pp. 921-924, 1985. | | |
| | BQ | Ekimov, A.I. <i>et al.</i> , "Size quantization of the electron energy spectrum in a microscopic semiconductor crystal," <i>JETP Lett.</i> , Vol. 40, No. 8, 25 October 1984, pp. 1136-1139. | | |
| | BR | Ekimov, A.I. <i>et al.</i> , "Quantum size effect in the optical spectra of semiconductor microcrystals," <i>Sov. Phys. Semicond.</i> 16(7), July 1982, pp. 775-778. | | |
| <i>V</i> | BS | Ekimov, A.I. <i>et al.</i> , "Quantum size effect in three-dimensional microscopic semiconductor crystals," <i>JETP Lett.</i> , Vol. 34, No. 6, 20 September 1981, pp. 345-349. | | |
| <i>MC</i> | BT | Ekimov, A.I. <i>et al.</i> , "Oscillations of polarization of recombination radiation of a variable gap semiconductor in a magnetic field," <i>JETP Lett.</i> , Vol. 25 No.55, 526-528 (1977). | | |

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